

## ABSTRACT OF THE DISCLOSURE

Higher heat-exchange capacity and greater vapor-liquid throughflows are attained in a downflow condenser. The increased capacity is achieved by  
5 a new design in the manifold to encourage condensation and lessen entrainment of gas phase matter in subcooling flows of condensed liquid. The increased capacity is also achieved by tailoring the flowpaths for a two-phase mixture to avoid reduce liquid film buildup on tubewalls.